

# **Technology Handbook for The Arts and Technology Academy**

# Teacher Competencies in Technology

This document was created based on the International Society for Technology in Education (ISTE) National Educational Technology Standards for Teachers (NETS-Teachers). It is designed to give faculty at the Arts & Technology Academy a firm understanding of the NETS for teachers and the competencies or skills faculty are expected to know by the end of the 2004-2005 school year. If you have any questions please contact Dr. Maria Poindexter at [mpoindexter@dcata.org](mailto:mpoindexter@dcata.org) or EXT. 5221.



## **Educational Technology Standards for All Teachers**

Building on the NETS for Students, the ISTE NETS for Teachers (NETS•T) define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings. All ATA instructional staff should meet these educational technology standards at a minimum of the **Know and Use (U)** level. It is the responsibility of faculty to seek opportunities to meet these standards by the close of the 2004-2005 academic year.

The six areas of standards defined by the International Society for Technology in Education are:

- I. TECHNOLOGY OPERATIONS AND CONCEPTS**
- II. PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES**
- III. TEACHING LEARNING AND THE CURRICULUM**
- IV. ASSESSMENT AND EVALUATION**
- V. PRODUCTIVITY AND PROFESSIONAL PRACTICE**
- VI. SOCIAL, ETHICAL, LEGAL AND HUMAN ISSUES**



# Educational Technology Standards and Performance Indicators for Teachers

This section provides faculty with the six standards areas followed by the ISTE performance indicators and examples for ATA teachers. Performance indicators for each standard provide specific outcomes to be measured.

## I. Technology Operations and Concepts

### **ISTE Standard**

Teachers demonstrate a sound understanding of technology operations and concepts.

### **ISTE Indicators**

- Teachers demonstrate introductory knowledge, skills, and understanding of concepts related to technology.
- Teachers demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

## **EXAMPLES OF PERFORMANCE INDICATORS FOR ATA TEACHERS**

### **Teachers will:**

- Use basic computer operations such as editing; file management, printing, e-mail, multi-tasking, and networking.
- Evaluate the capability of a computer system and identify appropriate software and peripherals that are compatible with the system.
- Operate a computer and peripherals on a network or through remote access.
- Use Internet applications such as Outlook, Web browsers, file transfer protocol (FTP), Listservs and Newsgroups, web portals, and search engines.
- Apply basic maintenance and troubleshooting strategies for the hardware, software, and network components of the computer systems.
- Utilize help or support resources in solving problems.
- Use technologies to access professional interchange networks, and research databases like IMosaica.
- Use terminology related to computer and technology appropriately in written and oral communication.
- Use synchronous (live) and asynchronous (delayed) communication technologies for classroom learning situations.
- Understand the implications of the growing interdependence of technologies.
- Use productivity tools to enhance professional tasks such as correspondence, assessment, classroom materials, presentations, etc.



## II. Planning and Designing Learning Environments and Experiences

### **ISTE Standard**

Teachers plan and design effective learning environments and experiences supported by technology.

### **ISTE Indicators**

- Teachers design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- Teachers apply current research on teaching and learning with technology when planning learning environments and experiences.
- Teachers identify and locate technology resources and evaluate them for accuracy and suitability.
- Teachers plan for the management of technology resources within the context of learning activities.
- Teachers plan strategies to manage student learning in a technology-enhanced environment.

## **EXAMPLES OF PERFORMANCE INDICATORS FOR ATA TEACHERS**

### **Teachers will:**

- Know how to assess, select, and use a variety of hardware types to support instruction such as:

Computer systems  
CD-ROMs  
Scanners  
Projection devices  
Calculators

Cameras  
Wireless PDAs  
Distance education systems  
DVDs  
Audio/video recorders and players

- Know how to assess, select, and use a variety of tool-based and content-based software to support learning.
- Correlate the use of technology in learning environments to the application of technology in society.
- Effectively use broadcast instruction, audio/video conferencing, web-based instruction, and other emerging learning applications.
- Develop customized learning materials using word processing, database, spreadsheet, hypermedia, web authoring, video, graphics, desktop publishing, and other emerging applications.



- Understand and apply the characteristics of learners and the nature of the learning task to the selection and use of technology-based instructional strategies and presentation techniques.
- Implement various instructional technology strategies that support:
  - Interdisciplinary approaches
  - Adjusting instruction to accommodate individual characteristics (i.e., multiple intelligences and learning styles)
  - Enhancing human interaction
  - Diagnostic and achievement assessments
- Design and manage the physical learning environment to facilitate the implementation of instructional technology in teaching and learning.

### **III. Teaching, Learning, and the Curriculum**

#### **ISTE Standard**

Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.

#### **ISTE Indicators**

- Teachers facilitate technology-enhanced experiences that address content standards and student technology standards.
- Teachers use technology to support learner-centered strategies that address the diverse needs of students.
- Teachers apply technology to develop students' higher-order skills and creativity.
- Teachers manage student learning activities in a technology-enhanced environment.

### **EXAMPLES OF PERFORMANCE INDICATORS FOR ATA TEACHERS**

#### **Teachers will:**

- Integrate the Essential Technology Skills for Arts and Technology Students into curriculum plans to assist with student achievement of standards.
- Model technology as a research, productivity, presentation, and communication tool.
- Differentiate between appropriate and inappropriate uses of technology in teaching and learning.
- Align appropriate technologies with teaching and learning tasks.
- Apply best teaching, learning, and assessment practices such as:



- utilize instructional technologies to promote interdisciplinary approaches
  - use technology to support cooperative and collaborative learning strategies
  - match appropriate technologies with multiple intelligences, student learning characteristics, and learning styles
  - use technology to support active exploration and problem-based and inquiry-based learning
  - use technology to extend the learning environment beyond the classroom walls (i.e., collaborative projects, scientists, researchers, virtual field trips, etc.)
  - implement various strategies to create student ownership and accountability when utilizing technology in the curriculum
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- Use technology to bridge social, economic, and cultural boundaries.
  - Identify and implement assistive technologies when and where appropriate.
  - Provide students with access to quality distance education when appropriate.
  - Use technology to facilitate effective learner-centered instruction.
  - Create and use learning activities which incorporate technology while considering the diverse needs of students.
  - Use technology to manage curricular resources, such as assessment, attendance, productivity, and communication.
  - Use technology to assist with assessment and documentation of standards.
  - Use technology to build stronger partnerships with parents and the greater community (i.e., post lessons and grades on the web).
  - Use technology to communicate with others, including educators, administrators, parents, and experts.
  - Use a variety of technologies to assist students in developing portfolios.

#### **IV. Assessment and Evaluation**

##### **ISTE *Standard***

Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.

##### **ISTE *Indicators***

- Teachers apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- Teachers use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.



- Teachers apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

## EXAMPLES OF PERFORMANCE INDICATORS FOR ATA TEACHERS

### Teachers will

- Use digital portfolios to assess and report student progress.
- Use student management programs or electronic grade books for record keeping.
- Use technology to collect qualitative and quantitative data to help in student evaluation.
- Use multiple methods of electronic evaluation, such as:
  - online assessment
  - evaluation of student portfolios
  - authentic assessment of students through products, performances, and/or presentations
- Use technology to track student progress in order to demonstrate proficiency of standards.
- Use technology to collect, compile, and analyze student data to adjust and improve instruction.
- Implement various assessment strategies when utilizing technology in the curriculum.
- Use technology to analyze class performance and compare to a larger set of students locally, statewide, or nationally.
- Use e-mail, web-based resources, databases, and other appropriate telecommunications to provide rapid feedback about performance.

## V. Productivity and Professional Practice

### **ISTE Standard**

Teachers use technology to enhance their productivity and professional practice.

### **ISTE Indicators**

- Teachers use technology resources to engage in ongoing professional development and lifelong learning.
- Teachers continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- Teachers apply technology to increase productivity.



- Teachers use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

## EXAMPLES OF PERFORMANCE INDICATORS FOR ATA TEACHERS

### Teachers will:

- Use multimedia, hypermedia, and telecommunications to support effective instructional activities for lessons, presentations, demonstrations, and student projects.
- Utilize resources such as Educational Service Units, Internet, professional organizations, conferences, and journals to remain current in educational technologies.
- Implement various assessment strategies when utilizing technology in the curriculum.
- Use productivity tools to enhance professional tasks such as:

Correspondence

Assessment

Problem solving data  
collection

Decision-making

Presentations

Information management

Communication

- Understand and apply the characteristics of learners and the nature of the learning task to the selection and use of technology-based instructional strategies and presentation techniques.
- Utilize technologies to access information to enhance professional productivity, conduct research, and communicate through local and global professional networks.
- Select and implement the appropriate hardware, software, and peripherals for the teaching and learning task.
- Use technology to enhance school/home/community communications.
- Identify how the utilization of technology enhances student achievement.
- Understand and apply appropriate attitudes and skills toward:
  - the change process
  - ongoing training
  - new ideas
  - adapting technologies and strategies to individual and group needs
  - utilization of available resources
- Use technology to remain current in specific disciplines.



## **VI. Social, Ethical, Legal, and Human Issues**

### **ISTE Standard**

Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PreK-12 schools and apply those principles in practice.

### **ISTE Indicators**

- Teachers model and teach legal and ethical practice related to technology use.
- Teachers apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- Teachers identify and use technology resources that affirm diversity.
- Teachers promote safe and healthy use of technology resources.
- Teachers facilitate equitable access to technology resources for all students.

### **Examples of Performance Indicators for ATA Teachers**

#### **Teachers will:**

- Model behaviors in and outside the classroom that promote ethical and legal use of technology-based resources.
- Understand and uphold current copyright laws, rights, and responsibilities.
- Demonstrate an understanding of the impact of change and a need for life-long learning when infusing technology into teaching and learning.
- Select technology resources and print materials that reflect a diverse world.
- Design student learning activities which foster the equitable, ethical, and legal use of technology by students.



# Technology Competencies for Faculty at The Arts & Technology Academy

## **1.0 Computer Operation Skills**

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### **1.1 Start up and shut down computer system and peripherals**

- Use correct startup/shut down procedure according to computer type
- Start up and shut down printer
- Start up and shut down CD-ROM
- Start up and shut down scanner

### **1.2 Identify and use icons, windows, menus**

- Point, click, double-click, click and drag with mouse
- Maximize and minimize a window
- Use pull-down and expanded pull-down menus
- Select, open, and move an icon
- Select, open, move, and close a window
- Resize a window and title/stack windows
- Scroll up/down, left/right within a window
- Make a window active/inactive

### **1.3 Start an application and create a document**

### **1.4 Name, save, retrieve, and revise a document**

- Name a document
- Save a document using both the Save and Save As Commands
- Retrieve a document from floppy disk
- Retrieve a document from hard drive
- Rename a document
- Retrieve a program or document
- Save a document to a specified location
- Edit and re-save a document

### **1.5 Use printing options**

### **1.6 Insert and eject floppy disk, CD-ROM and USB drives**

### **1.7 Copy document from hard disk to floppy disk and vice versa**

### **1.8 Create and name/rename subdirectories/folders**

### **1.9 Save, open, place documents inside subdirectories/folders**

### **1.10 Open and work with more than one application at a time**

### **1.11 Identify storage capacity of floppy/hard disks, CD-ROMs**

### **1.12 Identify similarities/differences and advantages/disadvantages of various operating systems**



### **1.13 Make more memory available**

### **1.14 Install/reinstall and update system software and printer drivers**

- Install/reinstall and update system software
- Install/reinstall and update printer drivers

### **1.15 Exchange disks and files among Macintosh, MS-DOS/Windows and Apple II computers**

## **2.0 Setup, Maintenance, and Troubleshooting**

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### **2.1 Setup computer system and connect peripheral devices**

- Setup computer system (i.e., CPU, monitor, keyboard, mouse, external drive)
- Connect peripheral devices (i.e., printers, CD-ROM, external drives, modem, digital camera, and scanner).

### **2.2 Protect and care for floppy disks**

### **2.3 Clean computer components and printer**

### **2.4 Make backup copies of key applications and documents**

### **2.5 Use self-help resources to diagnose and correct common hardware/printing problems**

### **2.6 Install and upgrade an application**

### **2.7 Proper operating environment for computer and peripherals**

### **2.8 Protection against computer viruses**

## **3.0 Word Processing/Introductory Desktop Publishing**

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### **3.1 Enter and edit text**

- Clipboard (a special location in the computer's memory that temporarily holds information)
- Cut (a function that removes highlighted information from its current location and places it on the clipboard)
- Copy (a function that duplicates highlighted information and places a copy on the clipboard)
- Paste (a function that copies information from the clipboard to a document)
- Delete text (using the mouse, place the I-beam cursor at the location where the new text is to be placed, click the mouse button and begin typing the new text)
- Insert text (using the mouse, place the I-beam cursor at the location where the new text is to be placed, click the mouse button, and begin typing the new text)



### **3.2 Copy and move blocks of text**

### **3.3 Change text format and style, set margin, line spacing, tabs**

- Sizing font, (change actual size of text)
- Style (choose type and special effects such as bold, italics underline)
- Margins (amount of white space on the top, bottom, left and right edges of page)
- Set margins (to change defaults, already set margins, by using margins)
- Line spacing (amount of space between lines in a paragraph such as single space, space and a half, and double space)
- Tab stops (align/justify to left, right, center, decimal tab)
- Tabs (used to position text within a line or to create tables of data)

### **3.4 Check spelling, grammar, word usage**

- Spell check
- Thesaurus
- Dictionary, outliner, grammar check as applicable

### **3.5 Create a header or footer**

### **3.6 Insert date, time, page number**

### **3.7 Add table to document**

- Format table
- Add text
- Change borders and shading

### **3.8 Add columns to document**

### **3.9 Use painting and drawing tools**

### **3.10 Insert clip art into document**

### **3.11 Produce print-based products (e.g., newsletters, brochures, posters, books)**

- Layout
  - Specify multiple-columns
  - Set up horizontal & vertical guides
  - Use column guides & rulers (position zero, lock/unlock guides, reposition rulers, equal/unequal columns)
  - Create Master Page (display and hide elements)
- Text
  - Create, place, format, & position text (create drop caps, apply shading, rotating text, auto flow/reflow text, manual flow text, auto page number, custom text wrap)
  - Rotate text
  - Create banner text
  - Create Table of Contents, Index
  - Create & apply styles
  - Format tabs & indents
- Graphics



- Resize and position objects, proportionally scale objects
- Create, place, format, & position graphics elements (draw and position objects, group, ungroup objects, shade, color)

## **4.0 Spreadsheet/Graphing**

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### **4.1 Interpret and communicate information in an existing spreadsheet**

- Understand the concept of a spreadsheet and relate a print spreadsheet to an electronic spreadsheet
- Understand the possibilities of spreadsheet calculations
- Given a print spreadsheet and an electronic spreadsheet, interpret and communicate information from each

### **4.2 Enter data in an existing spreadsheet**

- Given a spreadsheet template, enter data in a cell(s)
- Use the entry bar for data entry and editing
- Print a spreadsheet (with no text formatting, etc.)
- Manipulate data within an existing spreadsheet in order to solve a problem.

### **4.3 Create a spreadsheet with rows, columns, headings**

### **4.4 Create/copy formulas and functions to perform calculations**

- Understand the three basic types of cells (label, value, and formula)
  - Format a cell or range of cells for the following: currency, date, time, percentage, fixed decimal
  - Protect a cell or range of cells
  - Create spreadsheet with labels and values
  - Create a formula using a formula indicator symbol, cell references, and operations symbols (+-\*/)
  - Understand order of operations as it relates to writing a spreadsheet formula (PEMDAS)
- Create a formula using functions (SUM and AVERAGE) and a range of cells
  - Be aware of other functions available
  - Be aware of look up tables and their use
- Copy values using fill down and fill across
  - Copy formulas using fill down and fill across
  - Be aware of relative and absolute value as it relates to copying formulas
- Change the appearance of a spreadsheet by inserting columns and rows
  - Change the appearance of a spreadsheet using column width and row height
  - Change the appearance of a spreadsheet using gridlines, headers, and footers



- Change the appearance of a spreadsheet using text features for label cells
- Change the appearance of a spreadsheet using hiding and freezing/splitting

#### **4.5 Create a graph from spreadsheet data**

- Know the three basic types of graphs (bar, pie, line) and their uses
- Using a previously created graph, select a range of data and choose the appropriate graph
- Change and refine a graph's appearance to include headers, legend, labels, series, axes, color, etc.)
- Print a refined graph

#### **4.6 Insert a spreadsheet into a word processing document**

- Open a word processing document and insert an existing spreadsheet into the document
- Print a word processing document with an inserted spreadsheet
- Insert a pre-existing graph into a word processing document
- Insert headers and footers

### **5.0 Database/PowerSchool**

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#### **5.1 Use information from an existing database-PowerSchool**

- Describe the difference between a print database and a computer database
- Use a prepared database (PowerSchool) to enter data
- Add a record to an existing database (PowerSchool)
- Delete a record to an existing database (PowerSchool)
- Search a database (PowerSchool) for specific information

#### **5.2 Sort a database (PowerSchool) by specific fields, add and delete records**

- Use a database (PowerSchool) to sort records (eg. grades, attendance)
- Use a database (PowerSchool) to search for desired information given 1 criterion
- Use a database (PowerSchool) to search for desired information given 2 criteria (using "and", "or", or "not" connectors)
- Use sorting and searching techniques to solve a specific problem

#### **5.3 Create multiple fields and records**

- Create multiple fields



- Create multiple fields and varying field sizes
- Create multiple records

#### **5.4 Create custom layouts including columnar reports**

- Create a layout/report utilizing various word processing skills (including fonts, size, style, alignment, and borders)
- Create a layout/report with headers and footers
- Create a layout to match an existing form
- Create a report with calculated summaries
- Print a database (PowerSchool)
  - Print individual records and/or forms
  - Print a database list/multiple records
  - Print a customized database report

#### **5.5 Insert database fields into word processing document**

- Create a word processing document with inserted database fields
- Print a merged word processing/database document

### **6.0 Telecommunications**

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#### **6.1 Use MS Outlook to communicate via E-mail.**

- Compare the process of sending and receiving messages electronically vs. non-electronically
- Compose new e-mail (address and subject; explanation of address domains)
- Send e-mail (concepts of carbon copy (cc) and blind carbon copy (bcc))
- Send e-mail with an attachment
- Retrieve and read e-mail on and off site
- Reply to sender and forward e-mail
- Save, print, and delete e-mail
- Create/use specialized group addresses
- Upload a text file and send as electronic mail

#### **6.2 Use the MS Outlook Calendar**

- View a specific day, week and month
- Create an appointment
- Organize a meeting
- View group schedules



## **7.0 World Wide Web**

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### **7.1 Access and use resources on the Internet and World Wide Web**

- Identify computers as tools for accessing current information (concept of Internet as a large network and database)
- Use browser software (concepts: hypertext, html, homepage)
- Access IMosaica and the Paragon site by entering the appropriate URL
- Find a search engine site and perform a specific web search (list of search engines and purposes)
- Knowledge and use of filters (software driven, server based, search engine inclusive)
- Identify and maintain a list of current web sites that reflect your curriculum
- Create Bookmarks for specific educational sites

### **7.2 On-line conferences relevant to professional information needs**

- Actively use on-line opportunities (list serves, bulletin boards etc.) to acquire professional development and knowledge

## **8.0 Electronic Media/Portfolio**

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### **8.1 Use a linear multimedia presentation**

### **8.2 Use a non-linear, hypermedia presentation**

### **8.3 Produce electronic slides/overheads**

- Ensure good design features
- Select template
- Outline presentation
  - Create basic outline
  - Use Tools to modify/rearrange
- Slides
  - Define/edit color scheme
  - Position & format text
  - Insert graphics, sound, and/or video
  - Organize slides for slide show
  - Insert appropriate transitions
  - Run and/or edit slide show

### **8.4 Set up and operate a videocassette recorder/player and monitor/TV**

### **8.5 Connect a video output device (e.g., Avery key) to computer for large screen display**

### **8.6 Plan/produce a linear multimedia presentation**



- 8.7 Plan/produce a non-linear, hypermedia presentation**
- 8.8 Use a file compression utility**
- 8.9 Input and digitize sound from microphone and audiocassette player/recorder**
- 8.10 Create simple animations**
- 8.11 Use digital camera and scanner**
- 8.12 Use camcorder and edit video from a camcorder**
- 8.13 Produce a video**



Name:  
Observer:

Grade:  
Completion Date:

## TECHNOLOGY COMPETENCIES EVALUATION 2004-2005

LEVEL OF PROFICIENCY		DESCRIPTION.
1	Novice	Familiar with concept, unable to perform task.
2	Emerging	Understands concept, not clear on how to perform task.
3	Proficient	Understands concept, able to perform task.
4	Advanced	Understands concept, able to perform task <i>and</i> able to relate to or use in job function.

1. Computer Operation Skills	Level of Proficiency	Date Skill Evaluated
1.1 Can start up and shut down computer system and peripherals		
1.2 Able to identify and use icons, windows, menus		
1.3 Able to start an application and create a document		
1.4 Able to name, save, retrieve, and revise a document		
1.5 Able to use printing options		
1.6 Able to insert and eject floppy disk, CD-ROM and USB drives		
1.7 Able to copy document from hard disk to floppy disk and vice versa		
1.8 Able to create and name/rename subdirectories/folders		
1.9 Able to save, open, place documents inside subdirectories/folders		
1.10 Can open and work with more than one application at a time		
1.11 Can identify storage capacity of floppy/hard disks, CD-ROMs		
1.12 Can identify similarities/differences and advantages/disadvantages of various operating systems		
1.13 Can exchange disks and files among Macintosh, MS-DOS/Windows and Apple II computers		

Name:  
Observer:

Grade Level:  
Completion Date:

<b>2. Setup, Maintenance, &amp; Troubleshooting</b>	<b>Level of Proficiency</b>	<b>Date Skill Evaluated</b>
2.1 Can set up computer system and connect peripheral devices		
2.2 Able to protect and care for floppy disks		
2.3 Can clean computer components and printer		
2.4 Able to Make backup copies of key applications and documents		
2.5 Able to use self-help resources to diagnose and correct common hardware/printing problems		
2.6 Maintains proper operating environment for computer and peripherals		
2.7 Able to protect against computer viruses		

<b>3. Word Processing/Intro. Desktop Publishing</b>	<b>Level of Proficiency</b>	<b>Date Skill Evaluated</b>
3.1 Enter and edit text		
3.2 Copy and move blocks of text		
3.3 Change text format and style, set margin, line spacing, tabs		
3.4 Check spelling, grammar, word usage		
3.5 Create a header or footer		
3.6 Insert date, time, page number		
3.7 Add table to document		
3.8 Add columns to document		
3.9 Use painting and drawing tools		
3.10 Insert clip art into document		
3.11 Produce print-based products (e.g., newsletters, brochures, posters, books)		

Name:  
Observer:

Grade Level:  
Completion Date:

<b>4. Spreadsheet/Graphing</b>	<b>Level of Proficiency</b>	<b>Date Skill Evaluated</b>
4.1 Interpret and communicate information in an existing spreadsheet		
4.2 Enter data in an existing spreadsheet		
4.3 Create a spreadsheet with rows, columns, headings		
4.4 Create/copy formulas and functions to perform calculations		
4.5 Create a graph from spreadsheet data		
4.6 Insert a spreadsheet into a word processing document		

<b>5.0 Database/Powerschool</b>	<b>Level of Proficiency</b>	<b>Date Skill Evaluated</b>
5.1 Use information from an existing database-PowerSchool		
5.2 Sort a database (PowerSchool) by specific fields, add and delete records		
5.3 Create multiple fields and records		
5.4 Create custom layouts including columnar reports		
5.5 Insert database fields into word processing document		

<b>6.0 Telecommunications</b>	<b>Level of Proficiency</b>	<b>Date Skill Evaluated</b>
6.1 Use MS Outlook to communicate via E-mail		
6.2 Use the MS Outlook Calendar		

<b>7. World Wide Web</b>	<b>Level of Proficiency</b>	<b>Date Skill Evaluated</b>
7.1 Access and use resources on the Internet and World Wide Web		
7.2 On-line conferences relevant to professional information needs		

Name:  
Observer:

Grade Level:  
Completion Date:

<b>8. Electronic Media/Portfolio</b>	<b>Level of Proficiency</b>	<b>Date of Evaluation</b>
8.1 Use a linear multimedia presentation		
8.2 Use a non-linear, hypermedia presentation		
8.3 Produce electronic slides/overheads		
8.4 Set up and operate a videocassette recorder/player and monitor/TV		
8.5 Connect a video output device (e.g., Avery key) to computer for large screen display		
8.6 Plan/produce a linear multimedia presentation		
8.7 Plan/produce a non-linear hypermedia presentation		
8.8 Use a file compression utility		
8.9 Input and digitize sound from microphone and audiocassette player/recorder		
8.10 Create simple animations		
8.11 Use digital camera and scanner		
8.12 Use camcorder and edit video from a camcorder		
8.13 Produce a video		

**Comments:**

# **PRODUCTIVITY & PROFESSIONAL PRACTICE**

## **Productivity and Professional Practice- Electronic Communication**

- ✚ All ATA Staff and Teachers will be able to demonstrate or provide evidence of the following Productivity Skills and Professional Practices in Electronic Communication
  - ✚ -Send and retrieve data on ATA's intranet
  - ✚ -Send and receive email messages
  - ✚ -Forward email messages
  - ✚ -Create a professional mailing address book in the Contacts folder of Outlook
  - ✚ -Demonstrate ability to access ATA email from the Internet
  - ✚ -Send an email message to a group of people (Community members, parents)
  - ✚ -Subscribe to at least one professional listserv and /or mailing lists
  - ✚ -Demonstrates awareness and use of appropriate email etiquette
  - ✚ -Send and receive email messages with an attachment
  - ✚ -Create a signature file
  - ✚ -Send and receive attendance data electronically using PowerSchool
  - ✚ -Send and receive gradebook data electronically using PowerGrade
  - ✚ -Process lunch count using the PCS system
  - ✚ -Create an electronic portfolio outlining Paragon program
  - ✚ -Create a website to communicate with parents and the outlying community
  - ✚ -Send and receive email communications with other schools outside the DC Metro Area
- ✚ Additional Suggestions for Professional Practice/ Electronic Communication:

## **Productivity and Professional Practice-Multimedia Presentations**

- ✦ All ATA Staff and Teachers will be able to demonstrate or provide evidence of the following Productivity Skills and Professional Practices with Multimedia Presentations
- ✦ -Connect a presentation system together independently (Computer, A verkey, TV)
- ✦ -Create a connected presentation using PowerPoint
- ✦ -Create a slideshow presentation with clip art
- ✦ -Create a slideshow with digital pictures
- ✦ -Create a slideshow with digital video
- ✦ -Create a slideshow presentation with sound (sound effects)
- ✦ -Create a slideshow presentation with both internal and external hyperlinks
- ✦ -Use PowerPoint to create an electronic portfolio

**Additional Suggestions for Prod/Professional practice with Multimedia Presentations**

## **Productivity and Professional Practice- Spreadsheet Proficiency**

- ✦ All ATA Staff and Teachers will be able to demonstrate or provide evidence of the following Productivity Skills and Professional Practices in Spreadsheet Proficiency
- ✦ -Create a spreadsheet
- ✦ -Modify cells for height, width, text alignment
- ✦ -Modify number format in a cell
- ✦ -Print a spreadsheet without the cell grid, column heading, and row heading
- ✦ -Create a graph from a range of spreadsheet cell data
- ✦ -Use formulas to organize data in a range of cells
- ✦ -Create a spreadsheet using student test data

Additional suggestions for spreadsheet proficiency

## **Productivity and Professional Practice- Word Processing**

All ATA Staff and Teachers will be able to demonstrate or provide evidence of the following Productivity Skills and Professional Practices

- ✦ Word Processing
- ✦ Enter and edit text
- ✦ -Copy and move blocks of text
- ✦ -Change text format and style, set margins, line spacing, and tabs
- ✦ -Create a bulleted list
- ✦ -Check spelling, grammar, and word usage
- ✦ -Create a header or footer
- ✦ -Insert date, time, page number
- ✦ -Add columns to a document
- ✦ -Insert clip art into a document
- ✦ -Import graphics from a variety of sources (scanned images, digital camera pictures, internet graphics, CD resource disks, ATA home directory)
- ✦ -Resize and crop graphics
- ✦ -Wrap text around images or clipart
- ✦ -Use the "save as" feature to create new versions of documents
- ✦ -Cut, copy, and paste text and graphics between two or more documents
- ✦ -Save documents in a personal folder on the file server or flash memory
- ✦ -Create mail merge documents and use templates
- ✦ -Insert a table or a spreadsheet within a word processing document
- ✦ -Create a hyperlink within a document

**Additional Suggestions for Productivity and Professional Practice in Word Processing**

## **Productivity and Professional Practice- Internet Proficiency**

All ATA Staff and Teachers will be able to demonstrate or provide evidence of the following Productivity Skills and Professional Practices in Internet Proficiency

- ✚ -Maintain a list of current URLs for at least five web sites which contain appropriate instructional materials for each of the core subjects
- ✚ -Create a bookmark file with at least ten web sites which are appropriate for instructional and professional use and are organized using labeled folders
- ✚ -Use Boolean operators to create a substantive search of educational and instructional materials ("Smart Search" using Google or Yahoo)
- ✚ -Create a document for students that include graphics and text copied from a web site as well as the appropriate citations.
- ✚ -Create at least two student activities using an on-line teacher tool site
- ✚ -Use at least three Web quests per school year that tie in with ATA curriculum goals
- ✚ -Contribute data and information to the ATA web site
- ✚ -Demonstrate ability to navigate effectively through an educational website
- ✚ -Awareness of "cookies"

**Additional Suggestions for Productivity and Professional Practice- Internet Proficiency**

## Teaching and Learning Tenets

All ATA Staff and Teachers will be able to demonstrate or provide evidence of the following Technology Integration Skills using these Teaching and Learning tenets

- ✚ Teaching- *Teachers will act as facilitators, guides, co-learners, and co-investigators*
- ✚ Actively support the use of technology as an educational tool as opposed to an outlet for student entertainment
- ✚ Implement instructional units that involve compiling, organizing, analyzing, and synthesizing information and use technology to support these processes
- ✚ Implement instructional lessons that incorporate student word processing activities into the curriculum
- ✚ Implement instructional lessons that incorporate student database creation activities into the curriculum
- ✚ Implement instructional lessons that incorporate student multimedia presentation activities into the curriculum
- ✚ Implement instructional lessons that incorporate appropriate and educational student Internet use into the curriculum
- ✚ Implement instructional lessons that incorporate student spreadsheet creation activities into the curriculum
- ✚ Insure that all students have daily access to technology through effective instructional lesson planning
- ✚ Learning -*Students will act as explorers, teachers, collaborators, and producers*
- ✚ Implement technology activities that support differentiated instruction (students need access to technology throughout the school day - as part of the classroom curriculum)
- ✚ Implement integrated technology classroom activities that involve teaming and/or small group collaboration
- ✚ Implement integrated technology classroom activities that require problem-solving principles and skills using technology resources
- ✚ Practice methods and strategies for integrating technology resources that support the needs of diverse learners.
- ✚ Implement integrated technology classroom activities that address Howard Gardner's multiple intelligences
- ✚ Implement activities that incorporate authentic uses of technology in real-life context

Suggestions for additions/deletions

# Arts & Technology Academy

## Technology Vision Statement

The Arts & Technology Academy student must be prepared to compete globally for educational, social, and economic resources. Many of these resources will be most readily available to those who have mastered the ability to use technology effectively. It is the vision of the Arts & Technology Academy technology plan to guide Arts & Technology Academy *students, their families, and staff* toward a more educational, ethical, innovative, and practical use of technology in all its current and future forms.

To graduate *students* who, as lifelong learners and future members of a world-wide workforce, will have the ability to be critical thinkers, informed decision makers, logical problem solvers, effective collaborators, seasoned communicators, and quality work producers.

To enable *students' families* to continually foster the ethical and productive use of technology outside the Academy's "four walls". And to advance family technology literacy as a support for all students.

To empower *teachers and staff* to accomplish their jobs more effectively and to grow as professionals by increasing their personal and professional technology skill sets. To develop the expertise of teachers to learn to appropriately apply technology to the teaching of curriculum content.

The Arts & Technology Academy's Technology plan, curriculum, and implementation strategies will be aligned with national, district and technology standards as outlined by the National Educational Technology Standards (NETS) for Students, Teachers, and Administrators.

## Security Risk & Threats

- Equipment may be constantly switching locations to accommodate new users or to accommodate rearrangement of school facility. Inventory and tracking of what is owned can prevent the loss of computers and peripheral equipment.
- Hardware needs to be protected from theft and destruction - keyboards, terminals, workstations, personal computers, printers, disk drives, communication lines, terminal servers, routers, etc.
- Supplies need to be protected from theft: ribbons, magnetic media, paper, forms, etc.
- Equipment needs to be protected from tampering.
- Software must be protected - licenses, source programs, object programs, utilities, diagnostic programs, operating systems, communication programs, etc.
- Network must be protected from loss or denial of service to your network users.
- Network must be protected from unauthorized access to system or data.
- Files must be protected from copying for unauthorized use. Data could be copied from on-line storage, off-line archives, back-ups (copies of network files that are recorded at intervals and kept on disks or tapes), audit logs, databases, during execution, or in transit over communication media.
- Computers must be protected from viruses which may corrupt data or cause network interruption.
- Network must be protected from intruders on your system or broadcasts to your system.
- System support must not be reliant on only one person - in the absence of that person other qualified personnel must be able to solve problems.

Proper documentation must exist and be safely stored for programs, hardware, systems, and local administrative procedures.

### Internet Access

- Student Access policy—Internet access policies must be created.
- Faculty Access policy

**INTERNET ACCESS**

## Technical Staff

Technical staff training is vital - your system will only be as good as your staff. Ensure faculty are technically quick and astute and then you must ensure that they are trained to handle all aspects of your current system. Technical staff must know how to fix the system themselves or who to call in a timely fashion to get the help they need. Your staff must stay abreast of new versions/releases of software that they should be learning and adding to your system. At least one key member of your technical staff must be aware of the general technology changes that are being introduced so that your school's long and short-term technical strategic plans will be kept up to date.

The training methods for technical staff are also varied. These range from:

- self teaching
  - peer teaching
  - vendor seminars
  - visits to observe technical staffs at other schools, the district office or industry
- regular technical classes at schools

Be sure to allocate time and funding for training. We suggest approximately \$1500 per person each year as an average starting point. Be sure to encourage your staff to teach each other what they have learned. It's a great way to reinforce learning and to effectively pass on training, while keeping your costs down. Again, training takes time. It is up to management to place priority on training and to effectively communicate that to the staff

## Faculty Training

Teachers will determine the rate at which computer technology is integrated into your school's curriculum. Their training should be a key focus area. Your plan should look at the base competency level which you would like all teachers to have; determine how far your teachers are from that goal; and put a plan in place to close that gap. We suggest that your plans not only include basic skills, but also specific training for the effective use of technology in the classroom and for the effective incorporation of technology into the curriculum.

We also suggest you provide on-going training, not only for new individuals, but to enable all your teachers to advance their skills and more effectively utilize technology to meet their teaching goals.

Methods for teacher training vary. They range from summer classes, weekend classes, afternoon classes, one-on-one tutoring with volunteer parents, and train-the-trainer sessions - to week-long classes during the school year when teachers are replaced by substitute teachers. Your school has to determine what combination will work for you.

Some schools and training institutes have been able to reinforce the teacher's training by giving them a workstation upon completion of their class(es). It is important that teachers have adequate access to computers after training, or training will not be retained.

Be sure to keep associated training costs in mind:

- Do you want to build a district training lab?
- Who will teach your classes?
- Will you send teachers to outside classes?

Will you have to pay substitute teachers

Remember to include all these costs in your capital and operating budgets.

## Assessing Infrastructure

- a. Where to store equipment
- b. Will equipment be secured
- c. Do you need to bolt down equipment? For safety purpose

Do you have power surge protectors, line conditioners and UPS for your equipment

Equipment and cables are sensitive to environmental conditions. The following lists some items to consider when planning your schools system:

- e. Adequate, dedicated electric power
- f. Air conditioning (must be considered for a room with 20 or 30 computers)

Appropriate kinds of conduit for pulling network cables (depending on the kinds of elements they are exposed to.

**ACCESSING INFRASTRUCTURE**

## **Public School Programs' Internet Access and Use Policy**

### **Guidelines**

With the guidance and instruction of teachers, students may retrieve, process, create, communicate, and evaluate electronic information via databases, bulletin boards, electronic mail, listservs, newsgroups, and world wide web sites to pursue the curriculum outcomes of the Charter School Programs of Arts and Technology Academy.

Students may access teacher-previewed, recommended, or evaluated information systems and sources in structured ways for instructional and curriculum purposes.

Regional school boards are encouraged to engage teachers in the evaluation of Internet resources and other learning materials, and to support the effective integration and use of those resources within the curriculum program.

Curriculum and instructional opportunities are to be available to all students

- to develop the skills and habits of accessing, selecting, using, creating and publishing information in a full range of print, non-print, and electronic formats for a range of audiences
- to research and solve self- and teacher- identified problems, questions, and issues that require original research and the critical analysis, evaluation, and use of a wide range of information bases
- to think and reflect critically, and to make decisions about data and information, based upon their personal values and learning needs
- to think and reflect critically to recognize the values, beliefs, perspectives, and biases of the information and information sources they encounter
- to pursue independent learning opportunities and interests with the support and direction of teachers and parents

***Sample Letter to Parents***

Date

School Address

Dear Parents

**Responsible Internet Use**

As part of your child's curriculum and the development of ATA skills, ATA is providing supervised access to the Internet. We believe that the use of the World Wide Web and e-mail is worthwhile and is an essential skill for children as they grow up in the modern world. Please would you read the attached Rules for Responsible Internet Use, and sign and return the consent form so that your child may use Internet at school.

Although there have been concerns about pupils having access to undesirable materials, we are taking positive steps to deal with this risk in school. Our school Internet provider operates a filtering system that restricts access to inappropriate materials. This may not be the case at home and we can provide references to information on safe Internet access if you wish. We also have leaflets from national bodies that explain the issues further.

Whilst every endeavor is made to ensure that suitable restrictions are placed on the ability of children to access inappropriate materials, the School cannot be held responsible for the nature or content of materials accessed through the Internet. The School will not be liable for any damages arising from your child's use of the Internet facilities.

Should you wish to discuss any aspect of Internet use (or to see a lesson in operation) please telephone me to arrange an appointment.

Yours sincerely,

# **Responsible Internet Use**

## **Rules for Students**

**We use the school computers and Internet connection for learning.  
These rules will help us to be fair to others and keep everyone safe.**

- **I will ask permission before entering any Web site, unless my teacher has already approved that site.**
- **On a network, I will use only my own login and password, which I will keep secret.**
- **I will not look at or delete other people's files.**
- **I will not bring floppy disks into school without permission.**
- **I will only e-mail people I know, or my teacher has approved.**
- **The messages I send will be polite and sensible.**
- **When sending e-mail, I will not give my home address or phone number, or arrange to meet someone.**
- **I will ask for permission before opening an e-mail or an e-mail attachment sent by someone I do not know.**
- **I will not use Internet chat.**
- **I see anything I am unhappy with or I receive messages I do not like, I will tell a teacher immediately.**
- **I know that the school may check my computer files and may monitor the Internet sites I visit.**
- **I understand that if I deliberately break these rules, I could be stopped from using the Internet or computers.**

**The school may exercise its right by electronic means to monitor the use of the school's computer systems, including the monitoring of web-sites, the interception of E-mail and the deletion of inappropriate materials in circumstances where it believes unauthorized use of the school's computer system is or may be taking place, or the system is or may be being used for criminal purposes or for storing text or imagery which is unauthorized or unlawful.**

# **Responsible Internet Use**

## **Rules for Staff**

The school computer system provides Internet access to students and staff. This Responsible Internet Use statement will help protect students, staff and the school by clearly stating what is acceptable and what is not.

- Access must only be made via the user's authorized account and password, which must not be given to any other person.
- School computer and Internet use must be appropriate to the student's education or to staff professional activity.
- Copyright and intellectual property rights must be respected.
- Users are responsible for e-mail they send and for contacts made.
- E-mail should be written carefully and politely. As messages may be forwarded, e-mail is best regarded as public property.
- Anonymous messages and chain letters must not be sent.
- The use of public chat rooms is not allowed.
- The school systems may not be used for private purposes, unless the head teacher has given permission for that use.
- Use for personal financial gain, gambling, political purposes or advertising is forbidden.
- The security of ATA systems must not be compromised, whether owned by the school or by other organizations or individuals.
- Irresponsible use may result in the loss of Internet access.

The school may exercise its right by electronic means to monitor the use of the school's computer systems, including the monitoring of web-sites, the interception of E-mails and the deletion of inappropriate materials in circumstances where it believes unauthorized use of the school's computer system is or may be taking place, or the system is or may be being used for criminal purposes or for storing text or imagery which is unauthorized or unlawful.

# Essentials of the Curriculum

## Grade Pre-Kindergarten

### Basic Concepts:

- Identify the major parts of a computer and peripheral devices: (CPU, keyboard, mouse, monitor, disk drive, printer, CD ROM player).
- Demonstrate the safe handling of a disk and CD.
- Utilize the mouse to:
  - move and point to a designated location;
  - point and click;
  - point and double click;
  - press and drag

### Keyboarding

- Correctly identify alpha-numeric keys on keyboard.
- Properly use striking technique to type keys.

### Multimedia

- Use CDs and a variety of multimedia programs such as storybooks, Reader Rabbit series, Dr. Suess, etc. to enhance and master mouse usage, keyboarding skills, and critical thinking.

### Internet

- Explore age appropriate websites to enhance and master mouse usage, keyboarding skills, and critical thinking.

# Essentials of the Curriculum

## Grade Kindergarten

### Basic Concepts:

- Continue to enhance and master skills introduced in Pre-Kindergarten including the following:
- Identify the major parts of a computer and peripheral devices: (CPU, keyboard, mouse, monitor, disk drive, printer, CD ROM player).
- Demonstrate the safe handling of a disk and CD.
- Utilize the mouse to:
  - move and point to a designated location;
  - point and click;
  - point and double click;
  - press and drag
- Understand basic computer terminology such as: icon, desktop, exit, program.

### Keyboarding

- Correctly identify alpha-numeric keys on keyboard.
- Properly use striking technique to type keys.
- Use both hands on the keyboard;
- Use the correct hand to key the space bar and the return (enter) key. On computer keyboards, students will also use the correct *hand* for the cursor (arrow) keys and the escape key; and,
- Demonstrate proper technique, with particular emphasis on body posture.

### Word Processing

- Identify the word processing icon on the desktop.
- Use proper double-clicking technique to open word processing program from the desktop.
- Demonstrate proper procedure to exit word processing program.

### Multimedia

- Use CDs and a variety of multimedia programs such as storybooks, Reader Rabbit series, Dr. Suess, and other software to be determined to enhance and master mouse usage, keyboarding skills, and critical thinking.

### Internet

- Identify the Internet Explorer icon on the desktop.
- Use proper double-clicking technique to open Internet Explorer from the desktop.
- Explore age appropriate websites to enhance and master mouse usage, keyboarding skills, and critical thinking.

# Essentials of the Curriculum

## Grade One

### Basic Concepts:

- Explain what a computer is and its basic capabilities.
- Open and close windows.
- Use the scroll bar.
- Select, open and quit programs.
- Utilize the alphabetic, numeric, symbol, and punctuation keys.
- Correctly use the following terms: word processing, cursor, tab, load, save, delete, font, style, graphics, text, print, scroll, compact disc, hardware, software.

### Keyboarding

- Demonstrate proper technique, with particular emphasis on body posture (see checklist);
- Use the correct hand for the following keys: cursor (arrow) keys, escape key, caps lock key, control key;
- Key the following using the correct *finger* of the correct hand: space bar, return or enter key, shift keys (both left and right); and,
- Key all of the alphabetic and numeric keys using the correct hand.

### Word Processing

Use a word processing program to:

- create, name, save, and print documents which include text and graphics;
- insert and delete text; and
- modify font, style and size of text.

### Multimedia

- Use a variety of multimedia programs such as encyclopedias, storybooks, and dictionaries.

### Internet

- Explore age-appropriate websites.
- Correctly type website addresses in address bar.

# Essentials of the Curriculum

## Grade Two

### Basic Concepts:

- Explain what a computer is and its basic capabilities.
- Correctly use the following terms: server, network, online, log in, log out, electronic mail, highlight, multimedia, data, audio, video.
- Move and resize windows.

### Keyboarding

- Demonstrate proper posture and technique
- Use the correct hand for the following special purpose keys: cursor (arrow) keys, escape key, backspace key, caps lock key, control key, insert key, delete key, break key;
- Key the following using the correct finger of the correct hand: space bar, return or enter key, shift keys (both left and right); and,
- Key the home row keys (a, s, d, f, j, k, l, and semicolon) by touch using the correct finger of the correct hand. Continue to key all other alphabetic and numeric keys using the correct hand.

### Word Processing

- Use word processing to:
- create, name, save, and print documents which include text and graphics;
- insert and delete text;
- modify font, style and size of text;
- edit work using a spelling checker;
- center the title of a document; and
- highlight text to modify and delete.

### Multimedia

- Use a variety of multimedia programs such as Storybook Weaver, KidPix and electronic encyclopedias and dictionaries, and other software to be determined.
- Participate in the creation of a multimedia class project.
- Use CDs and online databases for search and retrieval of information.

### Internet

- Use electronic mail to participate in collaborative projects.
- Explore age-appropriate websites
- Correctly type website addresses in address bar.

# Essentials of the Curriculum

## Grade Three

### Basic Concepts:

- Correctly use the following terms: database, file, select, search, chart, local area network, wide area network, world wide web, internet, bookmark, modem, home page.
- Demonstrate proper touch-typing techniques (placement and reach) by the end of the first semester.
- Type a minimum of 10 wpm with no errors as demonstrated on a timed typing test.
- Select and use technology appropriate to tasks.
- Apply technologies to strategies for problem solving and critical thinking.

### Keyboarding

- Demonstrate proper stroking technique for each letter of the alphabet
- Keyboard word lists and sentences using correct posture and proper stroking.
- Demonstrate proper usage of arrow keys, SPACE BAR, TAB, ENTER, SHIFT, CAPS LOCK, BACKSPACE, and DELETE
- Demonstrate proper letter/word deletion technique

### Word Processing

- Use a word processing program to:
- Create, name, save and print documents with text and graphics
- Cut, copy, and paste text and graphics
- Edit text using a spell checker and thesaurus

### Multimedia

- Create a multimedia presentation using Kid Pix and PowerPoint
- Create basic slide shows using a variety of slide types, text, word art, clip art, digital photos, graphics, etc.
- Use CDs and a variety of multimedia programs such as encyclopedias, dictionaries, and storybooks to enhance and master mouse usage, keyboarding skills, and critical thinking.

### Internet

- Use online databases for search and retrieval of information
- Explore age-appropriate websites

# Essentials of the Curriculum

## Grade Four

### Basic Concepts:

- Demonstrate proper touch-typing techniques (placement and reach) by the end of the first semester.
- Type a minimum of 15 wpm with no errors as demonstrated on a timed typing test.
- Select and use technology appropriate to tasks.
- Apply technologies to strategies for problem solving and critical thinking.
- Correctly use the following terms: server, network, file, cell, row, formula, margin, digital, crop, resize, alignment, browser, link

### Word Processing

- Use a word processing program to:
- Create, name, save and print documents with text and graphics
- Cut, copy, and paste text and graphics
- Edit text using a spell checker and thesaurus
- Import graphics from a variety of sources (scanned images, digital camera, internet graphics, etc.)
- Format text using various options on tool bar
- Adjust page and text settings such as alignment, margins, etc.

### Spreadsheets/Database

- Use MS Excel to:
- Create a spreadsheet
- Create a chart from a spreadsheet
- Enter a simple formula to calculate information in a spreadsheet
- Use an online database, Excel and/or Access to:
- Locate information in a database
- Create filters to retrieve selected information in a database
- Sort records in a database

### Multimedia

- Create a multimedia presentation using PowerPoint
- Create basic slide shows using a variety of slide types, text, word art, clip art, digital photos, graphics, etc.
- Enhance slide show presentations with various transition effects
- Orally present a slide show
- Operate a digital camera, scanner, LCD projector, and/or other peripheral device

### Internet

- Define search engine
- Use the internet to research topics in various search engines
- Explore age-appropriate websites

# Essentials of the Curriculum

## Grade Five

### Basic Concepts:

- Demonstrate proper touch-typing techniques (placement and reach) by the end of the first quarter.
- Type a minimum of 20 wpm with no errors as demonstrated on a timed typing test.
- Select and use technology appropriate to tasks.
- Apply technologies to strategies for problem solving and critical thinking.
- Correctly use the following terms: bits, bytes, application, memory, RAM, ROM

### Word Processing

- Edit text using a spell checker and thesaurus
- Import graphics from a variety of sources (scanned images, digital camera, internet graphics, etc.)
- Format text using various options on tool bar
- Adjust page and text settings such as alignment, margins, etc.
- Use the "save as" feature to create new versions of the document and to save on different drives and folders
- Create headers and footers
- Resize and crop graphics

### Spreadsheets/Database

- Use MS Excel to:
- Create a spreadsheet
- Create a chart from a spreadsheet
- Enter a simple formula to calculate information in a spreadsheet
- Use an online database, Excel and/or Access to:
- Locate information in a database
- Create filters to retrieve selected information in a database
- Sort records in a database

### Multimedia

- Create a multimedia presentation using PowerPoint
- Create basic slide shows using a variety of slide types, text, word art, clip art, digital photos, graphics, etc.
- Enhance slide show presentations with various transition effects
- Add movies, mpegs, animated gifs, etc. in slide shows
- Orally present a slide show
- Operate a digital camera, scanner, LCD projector, and/or other peripheral device

### Internet

- Use the internet to research topics in various search engines
- Copy and paste text and graphics from the internet to a document
- Explore age-appropriate websites

# Essentials of the Curriculum

## Grade Six

### Basic Concepts:

- Demonstrate mastery of the ATA Technology standards for grade five.
- Type a minimum of 20 wpm with no errors as demonstrated on a timed typing test.
- Select and use technology appropriate to tasks.
- Apply technologies to strategies for problem solving and critical thinking.
- Explain how technology will affect changes in careers and society
- Describe the impact of technology on society in the last two decades

### Word Processing

- Use MS Word to produce 1-2 page documents, which may include graphics, simple spreadsheets, tables and/or databases.

### Spreadsheets/Database

- Define and explain the purpose of a database
- Create an original database; sort and filter in a database
- Create reports and summaries within databases
- Use databases to manage and analyze data
- Define and explain the purpose of a spreadsheet
- Create original spreadsheets and graphs (charts)
- Enter formulas to calculate data within a spreadsheet

### Multimedia

- Define and explain the purpose of multimedia
- Produce age and content appropriate multimedia presentation
- Enhance public speaking skills while orally presenting slide shows
- Use a variety of peripheral devices'

### Internet

- Use search strategies to acquire information
- Evaluate acquired information
- Determine the usefulness, appropriateness, and reliability of information that is acquired
- Copy and paste text and graphics from the internet to a document
- Explore age-appropriate websites